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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/917,700

07/31/2001

Makoto Itonaga

1994/00026

9909

7590

01/24/2005

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EXAMINER

VUONG, BACH Q

ART UNIT

PAPER NUMBER

2653

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/917,700

Applicant(s)

ITONAGA ET AL.

Examiner

Bach Q. Vuong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-7,9 and 10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 3-7,9 and 10 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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This communication is responsive to an amendment filed on 10/06/2004

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first pair of a first area and second area, the second pair of a third area and fourth area, the third pair of a first area and fourth area, and fourth pair of the second area and third area as recited in claim 9 and 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 9 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Tateishi et al. (US 6,282,160).

Regarding claim 9, see Figs. 1-14 which show a recording and reproduction apparatus for an optical information recording medium comprising a pit recording area recorded with various control information by a prepit, and a user recording area having a guide groove forming a groove format track, the depth of prepit and the groove being approximately the same and less than or equal to $\lambda/10$, where λ is the wavelength of a light source for reproducing information from the optical information medium, comprising: detecting means (see photo-sensor 21) including a light detector (see four photo-sensing areas 21a, 21b, 21c and 21d) having four areas defined as first to fourth areas in a first direction of a tangential line of the track, and in a second direction orthogonal to the tangential line, wherein a first pair of the a first area and a second area (see 21a and 21b) and a second pair of a third area and a fourth area (see 21C and 21d) are both aligned in the first direction; wherein a third pair of the first area and the fourth area (see 21a and 21d) and a fourth pair of the second area and the third area (see 21b and 21c) are both aligned in the second direction, for detecting information from the pit recording area by detecting a

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signal in a form of a tangential push-pull reproduced signal (see PP signal); further wherein the tangential push-pull reproduced signal (see subtractor 34) is detected by a difference of a first signal adding the signal reproduced from the third pair of the first area and the fourth area and a second signal adding the signal reproduced from the fourth pair of the second area and the third area, and for detecting user information reproduced from the user recording area by detecting a signal as an aggregated signal; wherein the aggregated signal is detected by adding the signal reproduced from a first area to fourth area (see adder 33); and decoding means (see demodulators 40, 60) for decoding information from the tangential push-pull reproduced signal and the aggregated signal.

Regarding claim 10, see Figs. 1-14 which show a reproduction apparatus for an optical information recording medium comprising a pit recording area recorded with various control information by a prepit, and a user recording area having a guide groove forming a groove format track, the depth of prepit and the groove being approximately the same and less than or equal to $\lambda/10$, where λ is the wavelength of a light source for reproducing information from the optical information medium, comprising: detecting means (see photo-sensor 21) including a light detector (see four photo-sensing areas 21a, 21b, 21c and 21d) having four areas defined as first to fourth areas in a first direction of a tangential line of the track, and in a second direction orthogonal to the tangential line, wherein a first pair of the a first area and a second area (see 21a and 21b) and a second pair of a third area and a fourth area (see 21C and 21d) are both aligned in the first direction; wherein a third pair of the first area and the fourth area (see 21a and 21d) and a fourth pair of the second area and the third area (see 21b and 21c) are both aligned in the second direction, for detecting information from the pit recording area by detecting a signal in a

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form of a tangential push-pull reproduced signal (see PP signal); further wherein the tangential push-pull reproduced signal (see subtractor 34) is detected by a difference of a first signal adding the signal reproduced from the third pair of the first area and the fourth area and a second signal adding the signal reproduced from the fourth pair of the second area and the third area, and for detecting user information reproduced from the user recording area by detecting a signal as an aggregated signal; wherein the aggregated signal is detected by adding the signal reproduced from a first area to fourth area (see adder 33); and decoding means (see demodulators 40, 60) for decoding information from the tangential push-pull reproduced signal and the aggregated signal.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tateishi et al. et al. (US 6,282,160) in view of Umezawa et al. (US 5,790,492).

Tateishi et al., according to Figs. 4-8, shows all the features of the instant claimed invention (see the rejection above) except for the use of a partial response polynomial equation as particularly recited in claims 3-7. Umezawa, according to Figs. 2, 7 and 8, teaches the use of viterbi decoder (see VD 6) including a partial response system (see column 7, line 59 through column 8, line 64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the viterbi

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decoder and partial response system as taught by Umezawa et al. into the optical disc player device of Tateishi et al. in order to improve the recording and reproduction apparatus for an optical disc of high recording density.

Response To Arguments

Applicant's arguments with respect to claimed invention have been considered but are moot in view of the new ground(s) of rejection.

Cited References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references relate to an optical recording and reproducing apparatus for an optical recording medium having read-only area and writable area thereon.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bach Q. Vuong whose telephone number is (703) 305-7355. The examiner can normally be reached on Monday-Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information

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about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BV
January 12, 2004



Thang Tran
Primary Examiner